APPENDIX A

Example Data Set Properties File

```
CORPUS_TYPE=1
VIEW=protein.aa\  gene.expression
source_file_0.com.bmi.vision.api.FastaDataFile.format=
source_file_class_0=com.bmi.vision.api.FastaDataFile
source_file_0.
com.bmi.vision.api.FastaDataFile.fullpath=/home/battelle/omniviz_data/sources
/yeast.fasta
number_sources=1
```

LAW OFFICES
FINNEGAN, HENDERSON, FARABOW, GARRETT, & DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000

APPENDIX B

>MJ0001 aspartate aminotransferase
□
MISSRCKNIKPSAIREIFNLATSDCINLGIGEPDFDTPKHIIEAAKRALDEGKTHYSPNN
GIPELREEISNKLKDDYNLDVDKDNIIVTCGASEALMLSIMTLIDRGDEVLIPNPSFVSY
FSLTEFAEGKIKNIDLDENFNIDLEKVKESITKKTKLIIFNSPSNPTGKVYDKETIKGLA
EIAEDYNLIIVSDEVYDKIIYDKKHYSPMQFTDRCILINGFSKTYAMTGWRIGYLAVSDE
LNKELDLINNMIKIHQYSFACATTFAQYGALAALRGSQKCVEDMVREFKMRRDLIYNGLK
DIFKVNKPDGAFYIFPDVSEYGDGVEVAKKLIENKVLCVPGVAFGENGANYIRFSYATKY
EDIEKALGIIKEIFE
>MJ0002
MEIFMEVPIFVVISGSDLYGIPNPSDVDIRGAHILDRELFIKNCLYKSKEEEVINKMFGK
CDFVSFELGKFLRELLKPNANFIEIALSDKVLYSSKYHEDVKGIAYNCICKKLYHHWKGF
AKPLQKLCEKESYNNPKTLLYILRAYYQGILCLESGEFKSDFSSFRCLDCYDEDIVSYLF
ECKVNKKPVDESYKKKIKSYFYELGVLLDESYKNSNLIDEPSETAKIKAIELYKKLYFED
VRE
>MJ0003
MKGKRIAIVSHRILNQNSVVNGLERAEGAFNEVVEILLKNNYGIIQLPCPELIYLGIDRE
GKTKEEYDTKEYRELCKKLLEPIIKYLQEYKKDNYKFILIGIENSTTCDIFKNRGILMEE
FFKEVEKLNIIIKAIEYPKNEKDYNKFVKTLEKMIK
>MJ0004 activator of (R)-2-hydroxyglutaryl-CoA dehydratase
MILGIDVGSTTTKMVLMEDSKIIWYKIEDIGVVIEEDILLKMVKEIEQKYPIDKIVATGY
GRHKVSFADKIVPEVIALGKGANYFFNEADGVIDIGGQDTKVLKIDKNGKVVDFILSDKC
AAGTGKFLEKALDILKIDKNEINKYKSDNIAKISSMCAVFAESEIISLLSKKVPKEGILM
GVYESIINRVIPMTNRLKIQNIVFSGGVAKNKVLVEMFEKKLNKKLLIPKEPQIVCCVGA
ILV
>MJ0005 formate dehydrogenase, beta subunit
MKYVLIQATDNGILRRAECGGAVTALFKYLLDKKLVDGVLALKRGEDVYDGIPTFITNSN
ELVETAGSLHCAPTNFGKLIAKYLADKKIAVPAKPCDAMAIRELAKLNQINLDNVYMIGL
NCGGTISPITAMKMIELFYEVNPLDVVKEEIDKGKFIIELKNGEHKAVKIEELEEKGFGR
RKNCQRCEIMIPRMADLACGNWGAEKGWTFVEICSERGRKLVEDAEKDGYIKIKQPSEKA
IQVREKIESIMIKLAKKFQKKHLEEEYPSLEKWKKYWNRCIKCYGCRDNCPLCFCVECSL
EKDYIEEKGKIPPNPLIFQGIRLSHISQSCINCGQCEDACPMDIPLAYIFHRMQLKIRDT
LGYIPGVDNSLPPLFNIER
>MJ0006 formate dehydrogenase, alpha subunit
MKVVHTICPGCSVGCGIDLIVKDDKVVGTYPYKRHPINEGKNCSNGKNSYKIIYHEKRLK
KPLIKKNGKLVEATWDEALSFIAEKLKNYNADDITFIASGKCTNEDNYALKKLVDSLKAK
IGHCICNSPKVNYAEVSTTIDDIENAKNIIIIGDVFSEHALIGRKVIKAKEKGSKVTIFN
TEEKEILKLNADEFVKVDSYLGVDLSNVDKNTIIIINAPVNVDEIIKTAKENKAKVLPVA
KHCNTVGATLIGIPALNKDEYFELLKNSKFLYIMGENPALVDKDVLKNVEFLVVQDIIMT
ETAEMADVVLPSTCWAEKDGTFINTDKRIQKINKAVNPPGDAMDDWLIIKSLAEKLGSDL
GFNSLEDIQQDIHRNKLL
>MJ0007 2-hydroxyglutaryl-CoA dehydratase, subunit beta
MMKLKAIEKLMQKFASRKEQLYKQKEEGRKVFGMFCAYVPIEIILAANAIPVGLCGGKND
TIPIAEEDLPRNLCPLIKSSYGFKKAKTCPYFEASDIVIGETTCEGKKKMFELMERLVPM
HIMHLPHMKDEDSLKIWIKEVEKLKELVEKETGNKITEEKLKETVDKVNKVRELFYKLYE
LRKNKPAPIKGLDVLKLFQFAYLLDIDDTIGILEDLIEELEERVKKGEGYEGKRILITGC
PMVAGNNKIVEIIEEVGGVVVGEESCTGTRFFENFVEGYSVEDIAKRYFKIPCACRFKND
ERVENIKRLVKELDVDGVVYYTLQYCHTFNIEGAKVEEALKEEGIPIIRIETDYSESDRE
QLKTRLEAFIEMI
>MJ0008
MFCGSMIAICMRSKEGFLFNNKLMDWGLHYNPKIVKDNNIIGYHAPILDLDKKESIIILK
NIIENIKGRDYLTIHLHNGKYGKINKETLIENLSIVNEFAEKNGIKLCIENLRKGFSSNP
NNIIEIADEINCYITFDVGHIPYNRRLEFLEICSDRVYNSHVYEIEVDGKHLPPKNLNNL
KPILDRLLDIKCKMFLIELMDIKEVLRTERMLKDYLEMYR

LAW OFFICES
FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D.C. 20005
202-408-4000

>MJ0009
MIFNENTPNFIDFKESFKELPLSDETFKIIEENGIKLREIAIGEFSGRDSVAAIIKAIEE
GIDFVLPVVAFTGTDYGNINIFYKNWEIVNKRIKEIDKDKILLPLHFMFEPKLWNALNGR
WVVLSFKRYGYYRPCIGCHAYLRIIRIPLAKHLGGKIISGERLYHNGDFKIDQIEEVLNV
YSKICRDFDVELILPIRYIREGKKIKEIIGEEWEQGEKQFSCVFSGNYRDKDGKVIFDKE
GILKMLNEFIYPASVEILKEGYKGNFNYLNIVKKLI
>MJ0010 phosphonopyruvate decarboxylase
MRAILILLDGLGDRASEILNNKTPLQFAKTPNLDRLAENGMCGLMTTYKEGIPLGTEVAH
FLLWGYSLEEFPGRGVIEALGEDIEIEKNAIYLRASLGFVKKDEKGFLVIDRRTKDISRE
EIEKLVDSLPTCVDGYKFELFYSFDVHFILKIKERNGWISDKISDSDPFYKNRYVMKVKA
IRELCKSEVEYSKAKDTARALNKYLLNVYKILQNHKINRKRRKLEKMPANFLLTKWASRY
KRVESFKEKWGMNAVILAESSLFKGLAKFLGMDFIKIESFEEGIDLIPELDYDFIHLHTK
ETDEAAHTKNPLNKVKVIEKIDKLIGNLKLREDDLLIITADHSTPSVGNLIHSGESVPIL
FYGKNVRVDNVKEFNEISCSNGHLRIRGEELMHLILNYTDRALLYGLRSGDRLRYYIPKD
DEIDLLEG

LAW OFFICES
FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000

APPENDIX C

□

RECORDKEY

□

TITLE: Effect of metabisulphite on sporulation and alkaline phosphatase in Bacillus subtilis and Bacillus cereus

□

DATE: 1990

□

The effect of metabisulphite on spore formation and alkaline phosphatase activity/production in Bacillus subtilis and Bacillus cereus was investigated both in liquid and semi-solid substrates. While supplementary nutrient broth (SNB) and sporulation medium (SM) were used as the liquid growth media, two brands of powdered milk were used as the food (semi-solid) substrates. Under both aerobic and anaerobic conditions, B. subtilis was more resistant to metabisulphite than B. cereus while the level of enzyme production and spores formed were generally higher under aerobic than anaerobic conditions. The metabisulphite concentrations required to inhibit spore production as well as alkaline phosphatase synthesis/activity were found to be relatively low and well within safety levels for human consumption. It is concluded that metabisulphite is an effective anti-sporulation agent and a recommendation for its general use in semi-solid and liquid foods is proposed.

RECORDKEY

TITLE: Effects of replacing saturated fat with complex carbohydrate in diets of subjects with NIDDM

DATE: 1989

This study examined the safety of an isocaloric high-complex carbohydrate low-saturated fat diet (HICARB) in obese patients with non- insulin-dependent diabetes mellitus (NIDDM). Although hypocaloric diets should be recommended to these patients, many find compliance with this diet difficult; therefore, the safety of an isocaloric increase in dietary carbohydrate needs assessment. Lipoprotein cholesterol and triglyceride (TG, mg/dl) concentrations in isocaloric high-fat and HICARB diets were compared in 7 NIDDM subjects (fat 32 +/- 3%, fasting glucose 190 +/- 38 mg/dl) and 6 nondiabetic subjects (fat 33 +/- 5%). They ate a high-fat diet (43% carbohydrate; 42% fat, polyunsaturated to saturated 0.3; fiber 9 g/1000 kcal; cholesterol 550 mg/day) for 7-10 days. Control subjects (3 NIDDM, 3 nondiabetic) continued this diet for 5 wk. The 13 subjects changed to a HICARB diet (65% carbohydrate; 21% fat, polyunsaturated to saturated 1.2; fiber 18 g/1000 kcal; cholesterol 550 mg/day) for 5 wk. NIDDM subjects on the HICARB diet had decreased low-density lipoprotein cholesterol (LDL-chol) concentrations (107 vs. 82, P less than .001), but their high-density lipoprotein cholesterol (HDL-chol) concentrations, glucose, and body weight were unchanged. Changes in total plasma TG concentrations in NIDDM subjects were heterogeneous. Concentrations were either unchanged or had decreased in 5 and increased in 2 NIDDM subjects. Nondiabetic subjects on the HICARB diet had decreased LDL-chol (111 vs. 81, P less than .01) and unchanged HDL-chol and plasma TG concentrations).(ABSTRACT TRUNCATED AT 250 WORDS)

RECORDKEY

TITLE: Enteral feeding of dogs and cats: 51 cases (1989-1991)

LAW OFFICES
FINNEGAN, HENDERSON, FARABOW, GARRETT, & DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000

DATE: 1992

Feeding commercial enteral diets to critically ill dogs and cats via nasogastric tubes was an appropriate means for providing nutritional support and was associated with few complications. Twenty-six cats and 25 dogs in the intensive care unit of our teaching hospital were evaluated for malnutrition and identified as candidates for nutritional support via nasogastric tube. Four commercial liquid formula diets and one protein supplement designed for use in human beings were fed to the dogs and cats. Outcome variables used to assess efficacy and safety of nutritional support were return to voluntary food intake, maintenance of body weight to within 10% of admission weight, and complications associated with feeding liquid diets. Sixty-three percent of animals experienced no complications with enteral feedings; resumption of food intake began for most animals (52%) while they were still in the hospital. Weight was maintained in 61% of the animals (16 of 26 cats and 15 of 25 dogs). Complications that did occur included vomiting, diarrhea, and inadvertent tube removal. Most problems were resolved by changing the diet or adhering to the recommended feeding protocol. Nutritional support as a component of therapy in small animals often is initiated late in the course of the disease when animals have not recovered as quickly as expected. If begun before the animal becomes nutrient depleted, enteral feeding may better support the animal and avoid serious complications.

TITLE: Microbiology of fresh and restructured lamb meat: a review

DATE: 1995

Microbiology of meats has been a subject of great concern in food science and public health in recent years. Although many articles have been devoted to the microbiology of beef, pork, and poultry meats, much less has been written about microbiology of lamb meat and even less on restructured lamb meat. This article presents data on microbiology and shelf-life of fresh lamb meat; restructured meat products, restructured lamb meat products, bacteriology of restructured meat products, and important foodborne pathogens such as Salmonella, Escherichia coli 0157:H7, and Listeria monocytogenes in meats and lamb meats. Also, the potential use of sodium and potassium lactates to control foodborne pathogens in meats and restructured lamb meat is reviewed This article should be of interest to all meat scientists, food scientists, and public health microbiologists who are concerned with the safety of meats in general and lamb meat in particular.

RECORDKEY

TITLE: Hyperacute stroke therapy with tissue plasminogen activator

DATE: 1997

The past year has seen tremendous progress in developing new therapies aimed at reversing the effects of acute stroke. Thrombolytic therapy with various agents has been extensively studied in stroke patients for the past 7 years. Tissue plasminogen activator (t-PA) received formal US Food and Drug Administration approval in June 1996 for use in patients within 3 hours of onset of an ischemic stroke. Treatment with t-PA improves neurologic outcome and functional disability to such a degree that, for every 100 stroke patients treated with t-PA, an additional 11-13 will be normal or nearly normal 3 months after their stroke. The downside of t-PA therapy is a 6% rate of symptomatic intracerebral hemorrhage (ICH) and a 3% rate of fatal ICH. Studies are under way to determine whether t-PA can be administered with an acceptable margin of safety within 5 hours of

stroke, to evaluate the therapeutic benefits of intraarterial pro-urokinase, and to assess the use of magnetic resonance spectroscopy to identify which patients are most likely to benefit from thrombolysis. Combination thrombolytic- neuroprotectant therapy is also being studied. In theory, patients could be given an initial dose of a neuroprotectant by paramedics and receive thrombolytic therapy in the hospital. We are now entering an era of proactive, not reactive, stroke therapies. These treatments may reverse some or all acute stroke symptoms and improve functional outcomes.

RECORDKEY
TITLE: A 12-month study of policosanol oral toxicity in Sprague Dawley rats
DATE: 1994
Policosanol is a natural mixture of higher aliphatic primary alcohols. Oral toxicity of policosanol was evaluated in a 12-month study in which doses from 0.5 to 500 mg/kg were given orally to Sprague Dawley (SD) rats (20/sex/group) daily. There was no treatment-related toxicity. Thus, effects on body weight gain, food consumption, clinical observations, blood biochemistry, hematology, organ weight ratios and histopathological findings were similar in control and treated groups. This study supports the wide safety margin of policosanol when administered chronically.

LAW OFFICES
FINNEGAN, HENDERSON, FARABOW, GARRETT, & DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000

APPENDIX D

```
NAME= NumericEngine
DESC= Format for source file produced by numeric engine.
END_DESC
DELIMITER= RECORDKEY

||F0
 NAME= Title
 TYPE= STRING
 TAG= TITLE:
 METHOD= LINES:1
 DOC_VECTOR= TRUE
 SEARCH= TRUE
 CORR= FALSE
 CASE_SENSITIVE= TRUE
 WHOLE_BOUNDARY= FALSE
 LINEPOS= FLOAT
||F1
 NAME= Components
 TYPE= STRING
 TAG= COMPONENTS:
 METHOD= LINES:1
 DOC_VECTOR= TRUE
 SEARCH= FALSE
 CORR= FALSE
 CASE_SENSITIVE= TRUE
 WHOLE_BOUNDARY= FALSE
 LINEPOS= FLOAT
||F2
 NAME= ChipData
 TYPE= NUMERIC
 TAG= ChipData:
 METHOD= LINES:1
 DOC_VECTOR= FALSE
 SEARCH= FALSE
 CORR= FALSE
 CASE_SENSITIVE= FALSE
 WHOLE_BOUNDARY= FALSE
 LINEPOS= FLOAT
||F3
 NAME= SGD_Name
 TYPE= STRING
 TAG= SGD_Name:
 METHOD= NEXT_TAG
 DOC_VECTOR= TRUE
 SEARCH= TRUE
 CORR= FALSE
 CASE_SENSITIVE= TRUE
 WHOLE_BOUNDARY= FALSE
 LINEPOS= FLOAT
||F4
```

LAW OFFICES
FINNEGAN, HENDERSON, FARABOW, GARRETT, & DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000

```
NAME= Description
TYPE= STRING
TAG= Description:
METHOD= NEXT_TAG
DOC_VECTOR= TRUE
SEARCH= TRUE
CORR= FALSE
CASE_SENSITIVE= TRUE
WHOLE_BOUNDARY= FALSE
LINEPOS= FLOAT
||F5
NAME= Location
TYPE= STRING
TAG= Location:
METHOD= NEXT_TAG
DOC_VECTOR= TRUE
SEARCH= TRUE
CORR= FALSE
CASE_SENSITIVE= TRUE
WHOLE_BOUNDARY= FALSE
LINEPOS= FLOAT
||F6
NAME= Deletion
TYPE= STRING
TAG= Deletion:
METHOD= NEXT_TAG
DOC_VECTOR= TRUE
SEARCH= TRUE
CORR= TRUE
CASE_SENSITIVE= TRUE
WHOLE_BOUNDARY= FALSE
LINEPOS= FLOAT
||F7
NAME= Peak
TYPE= STRING
TAG= Peak:
METHOD= NEXT_TAG
DOC_VECTOR= TRUE
SEARCH= TRUE
CORR= TRUE
CASE_SENSITIVE= TRUE
WHOLE_BOUNDARY= FALSE
LINEPOS= FLOAT
||F8
NAME= MCB_sites
TYPE= STRING
TAG= MCB_sites:
METHOD= NEXT_TAG
DOC_VECTOR= TRUE
SEARCH= TRUE
CORR= TRUE
CASE_SENSITIVE= TRUE
WHOLE_BOUNDARY= FALSE
LINEPOS= FLOAT
```

LAW OFFICES
FINNEGAN, HENDERSON, FARABOW, GARRETT, & DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000

```
||F9
NAME= SFF_sites
TYPE= STRING
TAG= SFF_sites:
METHOD= NEXT_TAG
DOC_VECTOR= TRUE
SEARCH= TRUE
CORR= TRUE
CASE_SENSITIVE= TRUE
WHOLE_BOUNDARY= FALSE
LINEPOS= FLOAT
||F10
NAME= Swi5e_sites
TYPE= STRING
TAG= Swi5e_sites:
METHOD= NEXT_TAG
DOC_VECTOR= TRUE
SEARCH= TRUE
CORR= TRUE
CASE_SENSITIVE= TRUE
WHOLE_BOUNDARY= FALSE
LINEPOS= FLOAT
||F11
NAME= Sequence_
TYPE= STRING
TAG= Sequence_:
METHOD= NEXT_TAG
DOC_VECTOR= TRUE
SEARCH= TRUE
CORR= FALSE
CASE_SENSITIVE= TRUE
WHOLE_BOUNDARY= FALSE
LINEPOS= FLOAT
```